SCANNER EQUIPMENT

EQUIPMENT AND ACCESSORIES FOR YOUR MONITORING POST

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Alinco DJ-X3T Portable Wide Band Receiver

Alinco's new DJ-X3T wide coverage scanner (fig. 1) is taller and thicker than the wafer thin DJ-X2T we reviewed in December 2000 *MT*. The T suffix indicates the version marketed in the US.

Both models tune AM, FM, and WFM signals, though the newer DJ-X3T coverage is extended to 0.1 to 1300 MHz.

The DJ-X3T comes with a battery tray with room for three AA size alkaline cells (fig. 2) and the instruction manual warns not to use NiCd batteries. A 3.6 VDC 500-mAH NiMH battery pack (EPB-52NS), charger (EDC-105), and AC power supply (EDC-92) are extra cost options. The older DJ-X2T is supplied with more goodies, namely, an internal lithium-ion battery, charger, and a tray for three AA alkaline batteries.

When powered by the three AA batteries, our DJ-X3T consumes about 85 mA while scanning. That's less than the IC-R2 (109 mA) and more than the VR-500 (73 mA), which are powered by two AA batteries.

Figure 1 - Alinco DJ-X3T

❖ Construction

The DJ-X3T is slim and prone to fall over if stood upright. The classy silver coloring distinguishes it from ICOM and Yaesu competitors. The supplied belt clip is made of plastic and attaches to the radio using a single screw. The battery is a tight fit initially, though it became easier to install with use.

The DJ-X3T has a single multipurpose rotary switch. The knob can be both twisted and pushed and serves to tune the radio, switch channels, and navigate the menus. Setting the volume and squelch on the Alinco portables we've tested has been a chore and it's the same story with the DJ-X3T. The knob must be pressed once, then rotated for volume adjustment. To set the squelch, you must push down on the knob twice, then twist.

Operations are performed using a four-key, nonnumeric pad and two side-mounted pushbuttons. The individual front key pushbuttons

have a positive feel and we prefer them to the DJ-X2T's plastic membrane "bubbles." The key press confirmation beep tone may be disabled via a menu.

The supplied flexible antenna screws onto a brass SMA connector. If you want to listen above 12 MHz without attracting unwanted attention, you can disconnect the flexible antenna and employ the earphone cord as an antenna. The DJ-X3T contains two internal "bar" antennas, one for AM broadcast band and the other for 1.625 - 12 MHz reception. You can choose to use the external antenna instead via menu settings. The internal AM BCB antenna affords better reception than using our IC-R2 with a short rubber antenna. For strong signal situations, you can navigate the menu system and enable an attenuator that is global to all channels.

❖ VFO, Memory, and Preset Modes

The DJ-X3T supports Memory, VFO, and Preset methods of operation. Like its predecessor, the DJ-X3T has a single VFO and 700 memory channels, divided into 10 banks of 70 channels.

The DJ-X3T can scan memory, search using the VFO or perform a limit search using one of 20 programmable ranges. A maximum of five memory banks may be linked together for scanning. The IC-R2 scans only one bank at a time and the VR-500 scans any combination of its 10 banks. All three models let you choose to resume scanning after a fixed interval or sometime after the signal ends. The DJ-X3T, DJ-X2T, and VR-500 rescan delay time is 2 seconds. The IC-R2 provides a choice of rescan delay times.

All three models permit memory channels to be locked out from the scan and frequencies to be skipped during a limit or VFO search.

The DJ-X3T's priority feature simply alternates between the VFO and one priority channel. You cannot scan memory with

priority as you can with the Uniden and GRE scanners.

Pressing the Bank button while in Preset mode cycles among AM, FM, and TV broadcast bands. The tuning knob selects either the frequency or TV channel and the frequencies are set up for American frequency allocations. The DJ-X3T contains a stereo decoder for WFM signals, though you'll need stereo earphones to benefit. You can force monaural reception using a menu option.

❖ Other Features

The signal strength meter consists of six dots. Thinking about using the descrambler? Forget about it! The descrambler is disabled in the "T" suffix model due to privacy laws.

The DJ-X3T has a simple "bugging detector" feature. When placed in the bugging detector mode, the DJ-X3T looks for a signal with "howling" feedback while scanning the memory channels you've programmed in advance. The howling is presumed to be feedback from an eavesdropping transmitter nearby. Will anyone use this feature?

The display is illuminated for 5 seconds after any keypress. A menu option disables the backlight.

❖ Radio and Computer Cloning

One DJ-X3T may be cloned to another if you buy or build a 3-conductor cable and connect the two radios via the earphone jack.
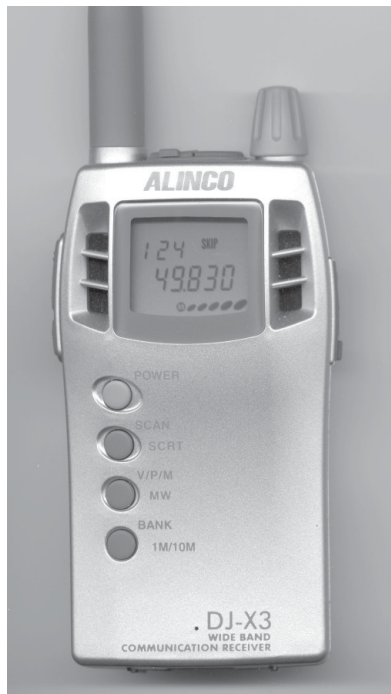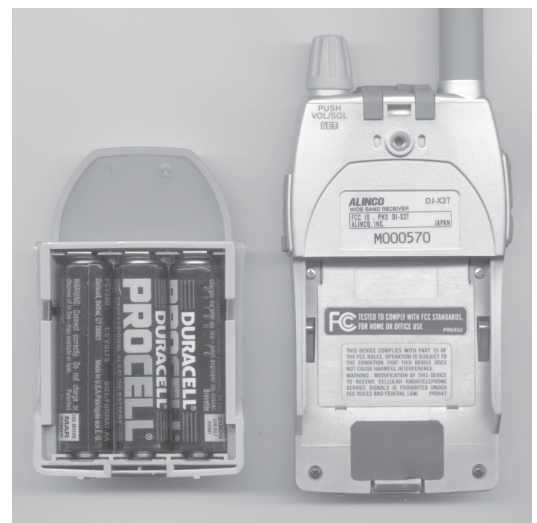

Figure 2 - Alkaline battery case (left). DJ-X3T rear view (right)
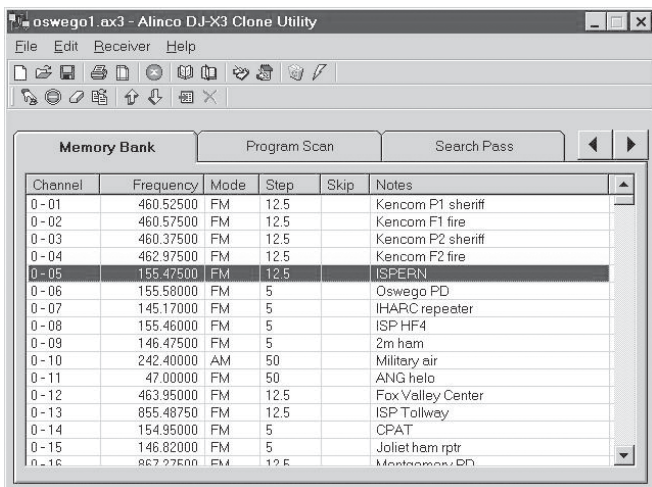
Figure 3 - DJ-X3T clone utility, showing memory contents
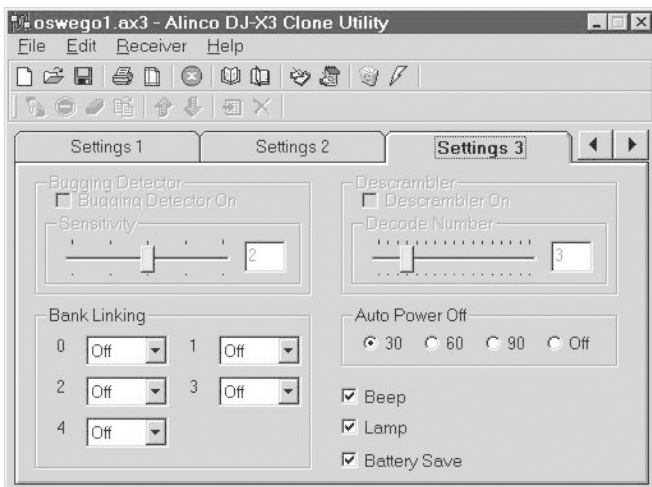

Figure 4 - DJ-X3T clone utility, showing one of the settings applets

Measurements

Alinco DJ-X3T Wideband Receiver S/N M000570

Alinco, Inc.
438 Amapola Ave., Unit 130
Torrance, CA 90501

Frequency coverage (MHz):
0.1 - 1299.995 (USA version, cell bands blocked)
Step sizes (kHz):
5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 30, 50, 100
Modes: AM, NFM, WFM
FM modulation acceptance: 8.4 kHz
Intermediate Frequencies:
248.45, 38.85 (AM, NFM), and 0.45 MHz
Image rejection due to 1st IF:
32 dB at 40 MHz
58 dB at 155 MHz
56 dB at 460 MHz
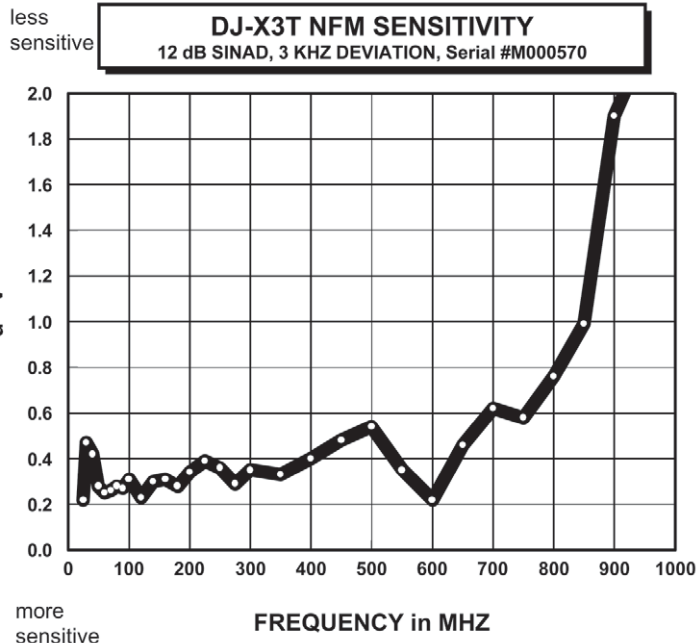61 dB at 860 MHz
Squelch tail: loud pop when squelch closes
Practical memory scan speed: 10 channels/sec.
Current consumption @ 4.5 VDC
  off: 0.05 mA
  scanning: 85 mA
  manual: 100
  full volume: 260 mA
Battery saver: after 5 sec. in manual mode
Low battery alarm threshhold: 3.5 VDC
Shutdown threshhold: 2.8 VDC

Users are able to program the DJ-X3T using a personal computer, the proper cable (not supplied), and software available free from the Alinco web site, **http://www.alinco.com**. The free software is quite good and made programming our DX-X3T so much easier.

❖ Performance

Our DJ-X3T works better than the DJ-X2T we used. The newer model has more audio, though it's still weaker than our IC-R2. Both our Alinco handhelds emit a loud noise burst ("kerchunk" sound) at the end of a transmission as the squelch closes.

The internal AM BCB bar antenna makes the DJ-X3T significantly more sensitive than our IC-R2 and VR-500 when listening to mediumwave broadcasters. The internal short-wave bar antenna is less decisive. Our DJ-X3T outperforms our IC-R2 and VR-500 in some 5 - 12 MHz tests, but other tests in the same range favor the competitors.

Our DJ-X2T exhibits better image rejection than the DJ-X3T, but the figures are good for both models.

❖ Bottom Line

The DJ-X3T is an improvement over the thinner DJ-X2T, both in audio level and keypad construction. Its styling is attractive and the numeric display is easy to view. We find the squelch tail distracting, but welcome the improvement in AM BCB reception afforded by the bar antenna.

A CTCSS decoding squelch would be much more useful than the DJ-X3T's bug detector. Despite providing excellent, no cost cloning software, Alinco should document the computer interface commands in the instruction manual to encourage the development of alternative software for Linux and Mac owners.

The Alinco DJ-X3T is available for $249.95 from Grove Enterprises (1-800-438-8155; http://www.grove-ent.com)

NOTICE: It is unlawful to buy cellular-capable scanners in the United States made after 1993, or modified for cellular coverage, unless you are an authorized government agency, cellular service provider, or engineering/service company engaged in cellular technology.